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EXAMINER

MITCHELL, JASON D

ART UNIT

PAPER NUMBER

2124

DATE MAILED: 09/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/929,965

Applicant(s)

NALAWADI ET AL.

Examiner

Jason Mitchell

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 August 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

This action is in response to an application filed on 08/14/2001

Claims 1-31 are pending in this case.

Applicant is advised that should claim 4 be found allowable, claims 19 and 20 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof.

When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 5,6,21,27, and 30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding Claims 5,6,21 and 27: It is not clear what Stock Keeping Unit (SKU) means. Clarification on it's meaning and how it is retrieved is required. For the purposes of this action, using the broadest reasonable definition it will be treated as referring to any unique identifier assigned by the manufacturer.

Claim Rejections - 35 USC § 102

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The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 5-6, 8-9, 11-16, 22, and 26-28 are rejected under 35 U.S.C. 102(b) as being anticipated by USPN 6,167,511 to Lewis (Lewis).

Regarding Claims 1, and 22: Lewis discloses a method and computer readable medium containing executable instructions (col. 6, lines 15-25 'computer readable code') for updating ACPI machine language (AML) code (col. 5, lines 40-42). Further Lewis inherently discloses searching for a pointer to a starting address of the AML code. Lewis discloses 'scanning all AML code' (col. 5, line 42), to do this one must first locate the code in memory and hence must search for a pointer to the starting address of the AML code. Additionally Lewis discloses providing appropriate update values for the AML code corresponding to board capabilities (col. 8, line 66-col. 9, line 3 'device options ... specified by an Original Equipment Manufacturer'), and updating the AML code (col. 8, lines 66-67 'modifying AML code') with said appropriate update values.

Regarding claim 5: As mentioned above, it is not clear what is meant by 'the board stock keeping unit', as a result this claim has been treated as best understood, using the broadest reasonable definition of a unique identifier associated with the board and corresponding manufacturer.

The rejection of claim 1 is incorporated; further, Lewis inherently discloses providing appropriate update values includes receiving a board SKU. Lewis discloses 'modifying the AML code so that device options ... specified by an Original Equipment Manufacturer ... are correctly reflected' (col. 8 line 66- col. 9, line 3). To do this the board must first be identified and the options specified must be provided.

Regarding Claim 6: the rejection of claim 5 is incorporated; further, Lewis inherently discloses determining the appropriate update values based on said board SKU for the same reasons described in claim 5.

Regarding claim 8: Lewis discloses a method for managing interfaces and power (col. 1, lines 13-16 'ACPI ... defines an extensible means by which an operating system can be given control over the power management and resource management'). Further Lewis inherently discloses searching for a pointer to a starting address of a power management machine code. Lewis discloses 'scanning all AML code' (col. 5, line 42), to do this one must first locate the code in memory and hence must search for a pointer to the starting address of the AML code. Additionally Lewis discloses providing appropriate update values for the power management machine code corresponding to board capabilities (col. 8, line 66-col. 9, line 3 'device options ... specified by an Original Equipment

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Manufacturer'), and updating the power management machine code with said appropriate update values (col. 8, lines 66-67 'modifying AML code'); and enabling an operating system to manage power and resources (col. 1, lines 13-16 'ACPI ... defines an extensible means by which an operating system can be given control over the power management and resource management').

Regarding Claim 9: the rejection of claim 8 is incorporated; further, Lewis discloses a method wherein said power management machine code is an AML code (col. 8, lines 66-67 'modifying AML code').

Regarding Claim 11: The rejection of claim 8 is incorporated; further, Lewis teaches a method wherein enabling an operating system includes reporting the board capabilities to the operating system (col. 9, lines 38-42 'communicates information to the OS').

Regarding Claim 12: The rejection of claim 8 is incorporated; further Lewis inherently discloses sending commands based on the power management machine code. The point of Lewis' system, and in fact all ACPI systems, is to act as an interface between the OS and the Hardware (col. 1, lines 29-30 'The ACPI hardware interface provides functionality to the OS'). So it is inherent that commands would be would be sent from the OS to the AML methods, and from the AML methods to the devices.

Regarding Claim 13: The rejection of claim 12 is incorporated; further, Lewis discloses his invention runs 'in a BIOS of a computer' (col. 5, lines 41-42) Therefore Lewis inherently discloses passing control to the operating system.

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Regarding Claim 14: Claim 14 is substantially the same as claim 8, and only the differences are addressed here. Refer to the rejection of claim 8 for any omissions.

Lewis discloses enabling an operating system to manage power and resources by reporting the board capabilities to the operating system (col. 1, lines 29-30 'The ACPI hardware interface provides functionality to the OS').

Regarding Claim 15: The rejection of claim 14 is incorporated; further Lewis inherently discloses sending commands based on the power management machine code. The point of Lewis' system, and in fact all ACPI systems, is to act as an interface between the OS and the Hardware (col. 1, lines 29-30 'The ACPI hardware interface provides functionality to the OS'). So it is inherent that commands would be would be sent from the OS to the AML methods, and from the AML methods to the devices.

Regarding Claim 16: the rejection of claim 14 is incorporated; further, Lewis discloses a method wherein said power management machine code is an AML code (col. 5, lines 40-41)

Regarding Claim 26: Lewis discloses an Advanced Configuration Power Interface (ACPI) system, comprising: a pre-boot code (col. 5, lines 41-42 'in a BIOS') to enable selection of ACPI capabilities (col. 8, lines 66-67 'modifying AML code') according to a board parameter that defines board capabilities (col. 8, line 66-col. 9, line 3 'device options ... specified by an Original Equipment Manufacturer') a table to store pointers to ACPI machine language code (col. 5, lines 13-23 'The DSDT contains ... control methods encoded in AML'); and an

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ACPI machine language code update element to update the ACPI machine language code (col. 8, lines 66-67 'modifying AML code') corresponding to the board capabilities (col. 8, line 66-col. 9, line 3 'device options ... specified by an Original Equipment Manufacturer').

Regarding Claim 27: As mentioned above, it is not clear what is meant by 'the board stock keeping unit', as a result this claim has been treated as best understood, using the broadest reasonable definition of a unique identifier associated with the board and corresponding manufacturer.

The rejection of claim 1 is incorporated; further, Lewis inherently discloses providing appropriate update values includes receiving a board SKU. Lewis discloses 'modifying the AML code so that device options ... specified by an Original Equipment Manufacturer ... are correctly reflected' (col. 8 line 66- col. 9, line 3). To do this the board must first be identified and the options specified must be provided.

Regarding Claim 28: The rejection of claim 26 is incorporated; further, Lewis discloses a system wherein the table includes Differentiated System Description Table (col. 7, lines 46-48).

Claims 29-31 are rejected under 35 U.S.C. 102(e) as being anticipated by USPN 6,185,677 B1 to Nijhawan (Nijhawan)

Regarding Claim 29: Nijhawan discloses a method for managing interfaces and power (col. 4, lines 36-37 'ACPI'), comprising: searching for a pointer to device

node structures (col. 5, lines 37-38 'scanning all device node structures'); providing appropriate update values for the device node structures corresponding to board capabilities (col. 6, lines 60-63 'provide information about current and possible resource requirements'); updating the device node structures with said appropriate update values (col. 5, lines 38-40 'modifies the ASL code ... based on the specified criteria').

Regarding Claim 30: The rejection of claim 29 is incorporated; further, Nijhawan discloses updating the device node structures (col. 8, lines 54-60 'generates ASL packages') after reading General Purpose Input values (col. 8, lines 51-54 'MCD macros...specific to the chipsets').

Regarding Claim 31: The rejection of claim 29 is incorporated; further, Nijhawan discloses enabling an operating system to manage power and resources (col. 4, line 37 'ACPI').

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-4,10,17-21, and 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6,167,511 to Lewis (Lewis) in view of 'Advanced

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Configuration and Power Interface Specification, Revision 2.0', Compaq et al., July 27, 2000 (ACPI 2.0).

Regarding Claims 2, and 23: The rejection of claims 1, and 23 is incorporated; further, Lewis does not disclose a method wherein said pointer to a starting address of the AML code is stored in a Differentiated System Description Table (DSDT). But does disclose an ACPI compliant BIOS (col. 5, line 67 - col. 6, line 1).

The ACPI 2.0 teaches 'The Differentiated System Description Table (DSDT) is part of the system fixed description in Definition Block format. This Definition Block is like all other Definition Blocks, with the exception that it cannot be unloaded' (pg. 110 ch. 5.2.10.1), and 'A Definition Block consists of data in AML format and contains information about hardware implementation details in the form of AML objects that contain data, AML code, or other AML objects' (pg. 109, ch. 5.2.10).. Given this definition of the DSDT table it would be obvious to one of ordinary skill in the art to search for a pointer to AML code in the DSDT table.

The ACPI 2.0 'was developed to establish industry common interfaces enabling robust operating system' (ACPI 2.0 pg. 1, ch. 1)

It would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teachings of the ACPI 2.0 to the methods disclosed in Lewis.

The modification would have been obvious because one of ordinary skill in the art would have been motivated to adhere to industry standards. (ACPI 2.0 pg. 1, ch. 1)

Regarding Claims 3, and 24: The rejection of claims 2 and 23 is incorporated; further, Lewis does not disclose updating the size of the Differentiated System description table. But does disclose ACPI compliant BIOS and/or operating system (Lewis, col. 5, line 67 - col. 6, line 1).

The ACPI 2.0 teaches, that the length field of the DSDT table holds 'the length of the table, in bytes, including the header, starting from offset 0. This field is used to record the size of the entire table.' (pg. 92, Table 5-4). It is very likely that any changes to the AML code contained within the DSDT would have changed the length of the Table. Therefore in order to maintain compliance with the ACPI 2.0, it would have been necessary to update the size of the Differentiated System Description Table. This would have been done to ensure the table remained accessible after the modifications were made.

It would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teachings of the ACPI 2.0 to the methods disclosed in Lewis.

The modification would have been obvious because one of ordinary skill in the art would have been motivated to adhere to industry standards. (ACPI 2.0 pg. 1, ch. 1)

Regarding Claims 4, and 25: The rejection of claims 3 and 24 are incorporated; further, Lewis does not disclose re-computing a checksum for the entire

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differentiated System Description Table. But does disclose ACPI compliant BIOS (Lewis, col. 5, line 67 - col. 6, line 1).

The ACPI 2.0 teaches 'The entire table, including the checksum field, must add to zero to be considered valid' (pg. 92, Table 5-4). Therefore in order to maintain compliance with the ACPI 2.0, it would have been necessary to re-calculate the checksum for the entire Differentiated System Description Table after changes were made to the AML code contained within. This would have been done to

ensure the table remained valid after the modifications were made.

It would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teachings of the ACPI 2.0 to the methods disclosed in Lewis.

The modification would have been obvious because one of ordinary skill in the art would have been motivated to adhere to industry standards. (ACPI 2.0 pg. 1, ch. 1)

Regarding Claim 10: The rejection of claim 9 is incorporated; further, Lewis does not disclose a method wherein said pointer to a starting address of the AML code is stored in a Differentiated System Description Table (DSDT). But does disclose ACPI compliant BIOS (Lewis, col. 5, line 67 - col. 6, line 1).

The ACPI 2.0 teaches 'The Differentiated System Description Table (DSDT) is part of the system fixed description in Definition Block format. This Definition Block is like all other Definition Blocks, with the exception that it cannot be unloaded' (pg. 110, ch. 5.2.10.1), and 'A Definition Block consists of data in AML format and contains information about hardware implementation details in the

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form of AML objects that contain data, AML code, or other AML objects' (pg. 109, ch. 5.2.10)..

Given this definition of the DSDT table is would be obvious to one of ordinary skill in the art to search for a pointer to AML code in the DSDT table. The ACPI 2.0 was written to define an extensible means by which an operating system can be given greater control over the power management of computer systems. (Lewis, col. 1, lines 14-16)

It would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teachings of the ACPI 2.0 to the methods disclosed in Lewis.

The modification would have been obvious because one of ordinary skill in the art would have been motivated to adhere to industry standards. (ACPI 2.0 pg. 1, ch. 1)

Regarding Claim 17: The rejection of claim 16 is incorporated; further Lewis does not disclose a method wherein said pointer to a starting address of the AML code is stored in a Differentiated System Description Table (DSDT). But does disclose an ACPI compliant BIOS (Lewis, col. 5, line 67 - col. 6, line 1)

The ACPI 2.0 teaches 'The Differentiated System Description Table (DSDT) is part of the system fixed description in Definition Block format. This Definition Block is like all other Definition Blocks, with the exception that it cannot be unloaded' (pg. 110, ch. 5.2.10.1), and 'A Definition Block consists of data in AML format and contains information about hardware implementation details in the form of AML objects that contain data, AML code, or other AML objects' (pg. 109,

ch. 5.2.10). Given this definition of the DSDT table it would be obvious to one of ordinary skill in the art to search for a pointer to AML code in the DSDT table.

The DSDT is provided to give access to implementation and configuration information (Lewis, col. 5, lines 14-15).

It would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teachings of the ACPI 2.0 to the methods disclosed in Lewis.

The modification would have been obvious because one of ordinary skill in the art would have been motivated to adhere to industry standards. (ACPI 2.0 pg. 1, ch. 1)

Regarding Claim 18: Claim 18 is broader than claim 4, but still incorporates claim 4, therefore it can be, and is rejected for the same reasons given in the rejection of claim 4.

Regarding Claim 19: Claim 19 is a substantial duplicate of claim 4 and is rejected for the same reasons given in the rejection of claim 4.

Regarding Claim 20: Claim 20 is a substantial duplicate of claim 4 and is rejected for the same reasons given in the rejection of claim 4.

Regarding Claim 21: As mentioned above, it is not clear what is meant by 'the board stock keeping unit', as a result this claim has been treated as best understood, using the broadest reasonable definition of a unique identifier associated with the board and corresponding manufacturer.

The rejection of claim 18 is incorporated; further, Lewis inherently discloses that providing appropriate update values includes, receiving a board SKU. Lewis

discloses 'modifying the AML code so that device options ... specified by an Original Equipment Manufacturer ... are correctly reflected' (col. 8 line 66- col. 9, line 3). To do this the board must first be identified and the options specified must be provided

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6,167,511 to Lewis (Lewis) in view of USPN 6,499,102 B1 to Ewertz (Ewertz).

Regarding Claim 7: The rejection of claim 1 is incorporated; further, Lewis does not disclose a method wherein the board capabilities include suspend state parameters, but does disclose changing the AML code representing a device (col. 8, lines 66-67 'modifying AML code so that device options ... are correctly reflected').

Ewertz teaches a method wherein the board capabilities include suspend state parameters (col. 10, lines 36-38, and Appendix A.), in an analogous art for the purpose of determining and setting the lowest supported sleeping state of a device (col. 1, line 67-col. 2, line 3).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to include suspend state parameters, as taught by Ewertz (col. 10, lines 36-38, and Appendix A.), as device options as disclosed in Lewis (col. 8, lines 66-67 'modifying AML code so that device options ... are correctly reflected')..

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The modification would have been obvious because one of ordinary skill in the art would have been motivated to provide updates to power management code, such as suspend states, because that is the purpose of the ACPI (Lewis col. 1, lines 14-17 'control over power management').

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Mitchell whose telephone number is (703)305-0064. The examiner can normally be reached on 7:30am - 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki can be reached on (703)305-9662.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Jason Mitchell
Examiner AU 2124
703-305-0064
08/12/04



ANIL KHATRI
PRIMARY EXAMINER
